

LETTER FOR FOSS MIDDLE SCHOOL COURSES

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Hello Students, Teachers, and Families,

To facilitate science teaching and learning during school closures, the FOSS team has provided additional Home/School Connections on the FOSS website <https://www.fossweb.com>. Students and families gain access to resources on FOSSweb through the class pages set up by the teacher. The teachers can leave notes on the class pages for students. Students can read those notes with assignment instructions from the teacher when they sign in to FOSSweb. Note that teachers may, instead, send FOSSweb assignments to students through other established parent communication apps or emails.

The new Home/School Connections for each course are active investigations that can be conducted at home (inside or outdoors), online readings, or online multimedia experiences including research. Most of these activities are part of the existing course that the students are learning, now formatted for students to access at home.

The teacher will decide which of the suggested activities are appropriate for students based on the classroom science experiences students have had through the year. Please refer to the teacher's communications home for specific expectations for assignments. The teacher may assign *FOSS Science Resources* readings, videos, and multimedia from investigations in the module or course.

For Students and Families: To sign in to FOSSweb, use the student user name and password provided by your teacher. Here's a short video to get you started on FOSSweb.

For Student Sign in Video: <https://youtu.be/Fcfjbt7Li2k>

For FOSSweb help: <https://www.fossweb.com/student-parent-help>

Preview the **Course Summary** from the Student Page. The **Module Overview** is available to download as a PDF. The first few pages of the Overview will help to set the context for the Home/School Connections.

For Teachers: For help in setting up and using Class Pages, use the Walk-through Videos on FOSSweb: <https://www.fossweb.com/fossweb-walkthrough-videos>

Visit the Home/School Connection for each module or course you teach, select the specific assignments that will be most relevant to your students at this point in instruction. Communicate with families about which content you are assigning through the Class Pages Notes on FOSSweb or through any other established parent communication channel your school has in place.

Tech support on FOSSweb: <https://www.fossweb.com/contact-us#jotform>

Together we will continue to make progress in science teaching and learning during school closures. Now, more than ever, we appreciate the role that science plays in our lives, and how important it is for citizens of all ages to understand and act based on scientific evidence

Sincerely, The FOSS Team at the Lawrence Hall of Science

FOSS Chemical Interactions, Home/School Connections, Families version COVID-19 School Closure Instructional Opportunities—March 17, 2020

NOTE: For all online research projects, we suggest that students use our [Internet Disclaimer](#) to help guide their independent evaluation of digital sources.

Element Profile

Students can choose an element. They should use one page of paper to create a full profile for the element with the following information laid out like on the Periodic Table.

- Symbol, element name, atomic number, atomic mass
- Also include date of discovery, discovered by, natural state

Choose at least two of the following categories and collect more information:

- Uses/ Human Interest
- Name Origin
- Characteristics & Properties: (boiling/freezing point, what it looks like)
- Natural sources/ Common forms

Research insulation

What materials are used for insulation most widely used in your area? In students' homes? In the school? Students can research this by interviewing people (such as local contractors) by phone and investigating around their home. They can also conduct online research to find out more about insulation materials, how they work, and why certain materials and techniques are best suited to their climate.

Learn about time crystals

In early 2017, two separate research teams successfully created what is considered a new form of matter: time crystals. Students can learn more about time crystals from [Berkeley News](#) and by searching online for updates to these findings.

Research other biochemical reactions

The chemical reaction in which stomach acid and food react is an important part of digestion, but it is only one of thousands of reactions that take place in the human body. Students can research other chemical reactions that make life possible for various organisms, including photosynthesis and aerobic cellular respiration.

Research careers

Have students research science and engineering careers related to the content in this

course, using the [Science and Engineering Careers Database](#) on FOSSweb. The database includes information about various careers and features diverse scientists.

Photo challenges

Students can take photos to answer one of the challenges below and create their own website, social media collection, or share the files with their teacher/classmates.

- Chemical Reactions Photo Challenge
Chemical reactions are all around us. They can be found in the kitchen, in the park, or on the city streets. Take a picture that shows evidence of a chemical reaction or a chemical reaction in process.
- Phase Changes Photo Challenge
Can you find evidence of matter changing from one phase to another?
Take a picture of a phase change or a phase change in process.
- Elements Photo Challenge
What elements can you find in your home or school environment?
Write a caption with the appropriate element names.